Application No.: 10/787,214 Docket No.: RASMUS 3.3-001 CONT

IN THE SPECIFICATION

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Please delete ¶ [0046] These aspects are dealt with in connection with method claims and

Please amend the following paragraphs as shown below:

[0030] Specific examples of the nature of components A and B are given in the appended claims as further described herein. For example,

[0031] The short reinforcement fibres or grain-, shell or film-pieces or flakes in some of those claims in relation to components A and B are can be preformed, and are preferably but not necessarily digestible, or of value for the digestion e.g. short protein fibres. An important example of applicable shell-pieces (or husks) is bran. They may contain absorbed aroma substances or the protein used for the fibres or film-pieces may have been brought to react with carbohydrate to form a caramel related compound.

[0039] The most advantageous row-formed cell structure is the composite structure with boundary cell-walls and, branching off herefrom bridging cells-walls, in a generally x-wards direction, for instance as stated in one or more of the claims herein and illustrated in FIG. 1a. In this drawing there are shown two B-components B1 and B2 (and the reasons for using 2 B-components as shown will be given below) but the drawing must be understood so that B1 and B2 can be one and the same component.

[0044] The additional cell-wall stated in one or more of the claims herein can serve to perfect the nesting of A in B, and are illustrated in FIGS. 1b, c and d.

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[0045] A and B may in fact each comprise more than one component. Very advantageous examples of B comprising components B1 and B2 (joined adhesively with each other) are stated in one or more of the claims herein and illustrated in and b, 6a and b, B2 preferably exhibiting a compressional yield point which is at least double that of B1. More preferably the yield point YP_{B120} of B_1 at 20 °C. is in the range 0.1 to 0.5 of the yield point YP_{B220} of the B_2 at 20 °C. Thus B2 may e.g. be tougher than B1 (in the final state of the product) depending on the method of manufacture and further dealt with later so that B1 easily is disrupted by the chewing to release the (tasty) A, while the consumption of B2 requires more chewing work--which is felt as a good combination. Furthermore when B2' is less deformable than B1 in the state it has during and immediately after the dividing in the coextrusion process, B2' helps to achieve the most regular cell structure. (In this specification the extrudable material used to make A of the final product is referred to as A' during the process; likewise extrudable B' forms B after processing, B1' forms B1, B2' forms B2 etc.

[0059] The claims define further a second method aspect of the invention. This aspect is defined in the second independent method claim. Preferably In a second method aspect of the invention, several flows of components A' preferably are formed interposed with flows of B'. The dividing members reciprocate or rotate relatives to the extruder exits to form segmental streams whilst modelling B' around A'.

[0093] In order to optimise the shaping of the segments in the dividing process this should preferably take place by shear ્યં .

between on one side the internal orifices through which the mutually interposed narrow flows are extruded, and on the other side the row of dividing members, and furthermore best by cutting action . The different ways of realising the cutting are specified in one or more of the claims herein. Examples of the shape and positioning of the knives for this action are shown in FIGS. 7a and 9. By means of the severing action and/or the "microsawing" specified in one or more of the claims herein it is possible to form very fine slices of the components even when these contain pulp or fibres.

[0096] A very advantageous way of achieving the modelling of B' around the segments of A' is stated in one or more of the claims provided herein. Generally speaking, two generally yz surfaces of each segment of A' are covered mainly by the part of B' which is joined with A' prior to the dividing, and the two xy surfaces of the segment of A' is covered mainly with B' from those internal orifices which carry B'-component alone. This provides improved possibilities for controlling the thickness of the B' layer in contact with the dividing member. A modification of this embodiment of the method comprises the use of two B'components B1' and B2', as . It is specified in one or more of the claims herein and shown in principle in FIG. 7a and with further details of the entire extrusion in other drawings as will become apparent from the detailed description of drawings. In connection with the description of product there already been discussion of the advantages modification, and it was mentioned that, provided B2' is less deformable than B1' in its state during and immediately after the dividing, B2' helps to achieve the most regular structure. This should be understood so B2' should normally be easier to bring to flow than B1'. However, the higher flowability will mean that the backpressure tends to squeeze B2' towards the

walls of the dividing members, whereby the "boundary cell walls" may become thicker than wanted, while the "bridging cell walls" may become thinner than wanted. The use of B2' component which shows more resistance to flow than B1' can fully solve this problem. B2' cant if wanted, have exactly the same composition as B1', but be fed into the extrusion apparatus at a lower temperature to give it higher resistance to deformation, e.g. it may be semifrozen.

[0097] It has already been mentioned that in many cases the nesting of the segments of A' in B' is most advantageously a full encasement. The method of the invention comprises two alternative embodiments (which can be combined) to achieve such structures, one being stated in one or more of the claims herein, and such as illustrated in FIGS. 7b and 11 b. The use of internal orifices which extend or are interrupted is dealt with here is known from the inventor's earlier patents on lamellar extrusion, but neither for the purpose of producing food products nor for production of any cellular structure comparable in geometric to the structures of this invention.

[0099] The alternative options for transformation of B' (which may in some cases be combined) are stated in one or more of the claims provided herein. In preferred embodiments of the method B' is transformed to harder B by cooling, normally after meltextrusion. Examples are: chocolate, swollen soya protein or gums. In some cases, when the process is sufficiently slow, e.g. consists in the formation of a gel, cooling of a fluid or plastic solution formed at a relatively high temperature e.g. about 100 °C. can be carried out prior to the extrusion, which then can be established at normal ambient, or lower temperature. Examples: adequately strong colloidal solutions of gelatine, carregenin or Ca-pectinate. Examples of solidification effected by heating of a colloidal solution: adequately strong colloidal solutions of egg albumin or gluten (or gluten-reinforced dough). Examples of reestablishment of the continuity in a previously disrupted gel are: a thixotropic colloidal solution of carregenin with addition of potassium ions (reestablishment on storage for a short time); heating/cooling of disrupted gels of casein or soya protein or starch.

[0136] Referring to the terms in one or more of the claims herein Here, (2) are the boundary cell walls, (3) the rows of Acells, (4) the bridging B-cell walls extending generally in z y planes and x y planes, and (5) the bridging B-cell walls extending generally in the x z plane.